

REMARKS

Claims 1-14, 16, and 17 are pending in this patent application. In the non-final Office Action dated June 14, 2004, the Examiner:

- 1) rejected claims 1, 3-7, and 9-11 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,489,895 to Apelman (hereinafter "Apelman");
- 2) rejected claims 1, 3-4, 6-7 and 9 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,655,561 to Wendel et al. (hereinafter "Wendel");
- 3) rejected claims 8, 12-14, 16 and 17 under 35 U.S.C. §103(a) as being obvious over Apelman in view of U.S. Patent No. 5,908,980 to Hwang et al. (hereinafter "Hwang");
- 4) rejected claims 5, 10-13, and 16-17 under 35 U.S.C. §103(a) as being obvious over Wendel in view of Apelman;
- 5) rejected claims 8 and 14 under 35 U.S.C. §103(a) as being obvious over Wendel in view of Apelman in further view of Hwang; and,
- 6) objected to claim 2 as being dependent upon a rejected base claim, but otherwise would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

In response to the Office Action, Applicant has amended claim 1. Applicant traverses the prior art rejections of independent claims 1 and 12, and their dependent claims, and respectfully requests reconsideration in light of the foregoing amendments and the following remarks.

Claim 1

Claim 1 was rejected as being anticipated by Apelman or Wendel.

However, neither reference teaches or suggests all of the limitations of claim 1

The invention of claim 1 is directed to a building protection system comprising a valve, a manual switch, a wireless transmitter, and a wireless receiver. Claim 1 requires that the manual switch has two states corresponding to the open or closed position of the valve, and that the manual switch be connected to the wireless transmitter. Claim 1 further requires that the wireless transmitter generate a signal *corresponding to the state of the manual switch*. Neither Apelman nor Wendel teach or suggest a manual switch that is connected to a wireless transmitter, nor do they teach or suggest that the wireless transmitter generates a signal corresponding to the state of the manual switch.

In the Office Action, the reset and trip switch of Apelman and the reset control 46 of Wendel were equated to the manual switch of the present claim. With respect to Apelman, it can be noted that the definition of the TRIP and RESET buttons is vague. In particular, the Apelman written description discusses both buttons (see, col. 4, lines 63-64; col. 7, lines 29-37). Based on this description, it appears that the TRIP and RESET push-buttons correspond to feature numbers 36, 37 in FIGS. 3-5. These switches are part of the master control unit 32, which is mounted to the wall outlet, as noted in the Office Action.

In support of the rejection, it was stated that Applicant's claim 1 recites merely "an operable association" between the elements. (June 14, 2004 Office Action, p. 2). However, claim 1 states that the manual switch is "connected to"

the wireless transmitter, which is more than merely an operable association. Neither the reset and trip switch of Apelman nor the reset control 46 of Wendel satisfies this limitation of claim 1. There is no indication in Apelman or Wendel that the switches are connected to a wireless transmitter. In fact, the reset control 46 of Wendel is shown in FIG. 2 as being part of the receiving unit and not the transmitter. Although the Apelman reset switch is in the control unit 32 having a radio link, there is no indication that the push-buttons 36, 37 are connected to that link. Moreover, the radio link in Apelman does not transmit a signal corresponding to or in response to the state signal received from the switch. Instead, the Apelman radio link activates an acoustic sounder. (See, col. 7, lines 14-18). Thus, with respect to the limitations of Applicant's claim 1, the Apelman switch is not connected to the transmitter.

The rejection was apparently premised on the assumption that any transmitter and any receiver in Apelman and Wendel satisfies Applicant's claim 1. Thus, the radio transmitter 11 of Apelman and the transmitting unit 10 of Wendel were equated to the wireless transmitter of the present claim. However, claim 1 requires that the radio transmitter is configured to generate a signal corresponding to the state of the reset and trip switch. The Apelman transmitter 11 is linked to the acoustic alert sounder (see col. 5, lines 60-62; col. 7, lines 18-21) to provide an audible alarm. However, there is no indication that either the transmitter 11 or the acoustic alert sounder is linked in Apelman to the manual switches 36, 37. More significantly, however, is the statement in Apelman that the transmitter 11 "signals to personnel that a leak is in progress" (col. 5, lines 61-

62) or "will transmit the alert status" (col. 7, line 20). It is clear that the Apelman transmitter 11 does not generate a signal corresponding to the state of a manual switch, as required by Applicant's claim 1.

Similarly, Wendel does not disclose that the transmitting unit 10 is configured to generate a signal corresponding to the state of the reset control 46. The wireless transmitter 10 of Wendel transmits a signal in response to electrodes touching water. (See, col. 4, lines 29-49). Since the Wendel reset switch 46 is on the receiver 36 (which includes RF receiver 38) there is no way for the transmitter 10 to receive any state signal from the switch. It can be seen that the transmitters of Apelman and Wendel do not transmit signals that correspond to the state of any manual switch, as required by Applicant's claim 1.

Moreover, there is no motivation or suggestion to modify Apelman to provide a manual switch connected to a wireless transmitter configured to transmit a signal based on the state of a manual switch. The Apelman TRIP switch is apparently used to test the unit – i.e., the "TRIP button may be depressed to SHUT OFF the incoming water line to act as a system test". Col. 7, lines 32-34. There is nothing in Apelman to suggest removing the TRIP switch from the master control unit 32 or even to suggest remote operation of the water shut –off system even in a test mode.

Likewise, there is no motivation to modify Wendel to connect the reset control to a wireless transmitter because the reset control is primarily operative to turn the system back on after a leak has been detected and the valve has been closed. (Se, col. 5, lines 13-15). The reset control 46 is apparently directly

connected to the solenoid valve 45. Again, there is no suggestion to move this switch to a remote location, especially since the switch is intended to reset or reopen the valve.

Since both Apelman and Wendel fail to teach, show, or suggest all the limitations of claim 1, it is respectfully submitted that claim 1 is allowable. In order to further clarify the wireless transmitter in claim 1, this claim has been amended to indicate that the transmitter receives the state signal from the manual switch and is operable to generate a transmitted signal in response thereto.

#### Claims 2-11

Claims 2-11 were rejected as being anticipated or obvious by different combinations of Apelman, Wendel, and Hwang. Each of claims 2-11 depends directly or indirectly from claim 1. As a result, it is respectfully submitted that each of claims 2-11 is allowable for, at least, the reasons hereinbefore discussed with regard to claim 1.

#### Claim 12

Claim 12 was rejected as being obvious over Apelman in view of Hwang or over Wendel in view of Apelman. For the reasons discussed below, neither combination teaches or suggests all of the limitations of claim 12.

The invention of claim 12 requires that a sensing switch and a temperature sensing switch be connected to a wireless transmitter. Claim 12

further requires that the wireless transmitter generate a transmitted signal corresponding to the signals generated by two switches – a leak sensing switch and a temperature sensing switch. Neither the combination of Apelman in view of Hwang nor Wendel in view of Apelman provide the teaching of a temperature sensing switch connected to a wireless transmitter, nor do they teach that the wireless transmitter generates a transmitted signal corresponding to a sensing signal *and* a temperature sensing signal.

The combination of Apelman in view of Hwang was cited as providing the teaching of "a plurality of sensors for detecting different parameters or conditions including a gas sensor or sensor switch." (June 14, 2004 Office Action, Page 3). Neither Apelman nor Hwang disclose or contemplate a temperature sensing switch. Hwang discloses the use of a pressure sensing device to detect gas leaks. Other than in fire conditions, gas flow is unaffected by temperature, so Hwang provides no motivation to add temperature sensing in lieu of sensing pressure. Neither reference discloses or suggests the use of a temperature sensing switch connected to a wireless transmitter to ultimately shut off a valve under low temperature conditions.

It is not enough to say that Hwang teaches different sensors and that this teaching anticipates any claimed invention using different sensors. The present invention contemplates two specific sensors – one to detect a utility leak in a building and the other to detect a temperature. The state of either sensor can be used to close the valve through which the utility flows. There is nothing in Hwang to specifically suggest the use of a temperature sensor, and there is nothing in

either Apelman or Hwang to suggest generating a signal when the temperature falls *below* a limit value.

With respect to the cited combination of Wendel in view of Apelman, the rejection inferentially suggests that Wendel provides the teaching of a temperature sensing switch connected to a wireless transmitter. Wendel does disclose the use of a temperature sensor. However, the temperature sensor 54 of Wendel is part of the receiving unit 36 and is not connected to a wireless transmitter. (See, Fig. 2, 5. col. 5, lines 24-30). Moreover, the temperature sensor 54 of Wendel is not operable to shut off the inlet valve. The temperature sensor of Wendel turns on a timer to a peltier device 58 which in turn heats the valve to prevent it from freezing. (See col.5, lines 30-35). Thus, Wendel actually operates contrary to the present invention. Heating a valve maintains water flow even in freeze conditions. Applicant's invention ceases water flow at freezing temperatures. Wendell uses its temperature sensor 54 to ensure that the valve "can be operated to shut off the water supply in the event that a frozen water pipe is burst". Col. 5, lines 40-43. Thus, Wendel only operates to shut off the valve *after* freezing temperatures have caused the pipes to burst. On the other hand, Applicant's invention of claim 12 seeks to prevent the pipe from bursting to begin with by shutting off the utility valve when a low temperature condition is sensed.

Since any combination of Apelman, Wendel, and Hwang fails to disclose all of the limitations of claim 12, it is respectfully submitted that claim 12 is allowable as written.

Claims 13-14 and 16-17

Claims 13-14 and 16-17 were rejected as being anticipated or obvious by different combinations of Apelman, Wendel, and Hwang. Each of claims 13-14 and 16-17 depends directly from claim 12. As a result, it is respectfully submitted that each of claims 13-14 and 16-17 is allowable for, at least, the reasons hereinbefore discussed with regard to claim 12.

**Conclusion**

In view of the foregoing remarks, Applicants submit that pending claims 1-9 are in condition for allowance over all references of record. Issuance of a notice of allowance in this application is earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, reading "Michael D. Beck". The signature is fluid and cursive, with the first name "Michael" and last name "Beck" clearly legible.

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